

Db	3	EHVNKYTEYEARTKAETILLYERGLITPAADVRRVVSYYNEIGPMGGAKVVAKSQWVDEY	62
Qy	69	KKRLLDAGTEACKELGIGGLQGEDMMWVENTDEVHHVVVCTLCSCYPWVPLGPPNWFKE	128
Db	63	RKWLEEDATAMASLGYAGEQAHQISAVENDSQTHHVVVVCTLCSCYPWVPLGPPAWYKS	122
Qy	129	PQYRSRVVREPRQLLKEEFGFEVPPSKEIKVWDSSEMRFVVLQRPAGTDGWSHEELAT	188
Db	123	MEYRSRVVADPRGVLRKDFGFDIPDEVEVVRVWDSSEIRYIVIPERAGTDGWSDELAQ	182
Qy	189	LVTRESMIGVEPA	201
Db	183	LVSRSDMIGVSNA	195

RESULT 4

S19714
nitrile hydratase (EC 4.2.1.84) alpha chain, H-type - *Rhodococcus rhodochrous*
(strain J1)
N;Alternate names: H-nitrilase
C;Species: *Rhodococcus rhodochrous*
A;Variety: strain J1
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S19714; S78584; S14771
R;Kobayashi, M.; Nishiyama, M.; Nagasawa, T.; Horinouchi, S.; Beppu, T.; Yamada,
H.
Biochim. Biophys. Acta 1129, 23-33, 1991
A;Title: Cloning, nucleotide sequence and expression in *Escherichia coli* of two
cobalt-containing nitrile hydratase genes from *Rhodococcus rhodochrous* J1.
A;Reference number: S19713; MUID:92096459; PMID:1840499
A;Accession: S19714
A;Molecule type: DNA
A;Residues: 1-203 <KOB>
A;Cross-references: UNIPROT:P21219; UNIPARC:UPI000000D661; EMBL:X64359;
NID:g49057; PIDN:CAA45710.1; PID:g581528
A;Experimental source: strain J1
A;Accession: S78584
A;Molecule type: protein
A;Residues: 2-27;162-173 <KOY>
A;Cross-references: UNIPARC:UPI00000147A97; UNIPARC:UPI00001760B0
R;Nagasawa, T.; Takeuchi, K.; Yamada, H.
Eur. J. Biochem. 196, 581-589, 1991
A;Title: Characterization of a new cobalt-containing nitrile hydratase purified
from urea-induced cells of *Rhodococcus rhodochrous* J1.
A;Reference number: S14771; MUID:91192028; PMID:2013281
A;Accession: S14771
A;Molecule type: protein
A;Residues: 2-29 <EUR>
A;Cross-references: UNIPARC:UPI00001760B1
C;Genetics:
A;Start codon: GTG
C;Function:
A;Description: catalyzes the hydration of nitrile compounds to the corresponding
aliphatic amides
A;Pathway: cyanoamino acid metabolism
C;Superfamily: nitrile hydratase, alpha subunit

Query Match 57.3%; Score 618; DB 2; Length 203;
Best Local Similarity 57.5%; Pred. No. 2.4e-47;
Matches 111; Conservative 32; Mismatches 48; Indels 2; Gaps 1;

Qy	11	EEIQK	EITARVKALESMLIEQGILLTSMIDRMAETIYENEGPHLGAKVVKAWTDPEF	68
		: : : : : : :		
Db	3	EWVWKYETEARTAKIETLLYERGLITPAAVDRVVSYIENEGPMGGAKKVAKSWDPEY	62	
		: : : : : : : : : : : : : :		
Qy	69	KKRLLADGTAECKELGIGGLQGEDMMWVENTDEVHHVVCTLCSCYPWVLGLPPNWKE	128	
		:		
Db	63	RKWLEEDATAAMASLGYAGEQAHQISAVFNDSQTHHVWVCTLCSCYPWVLGLPPAWYKS	122	
		: : : : : : : : : : : : : :		
Qy	129	PQYRSRWVREPRQLLKEEFGEFVPPSKIEIKWDDSSSEMRFWLPQRPAGTDGWSEELAT	188	
		: : : : : : : : : : :		
Db	123	MEYRSRWVADPRGVLKRGDFDIPDEVEVVRWDDSSSEIRYIVIPERPAGTDGWSEELTK	182	
		: : : : : : : : : : : : : :		
Qy	189	LVTRESMIGVEPA	201	
		:		
Db	183	LVSRRDSMIGVSNA	195	

RESULT 5

S04472
nitrile hydratase (EC 4.2.1.84) alpha chain [validated] - Rhodococcus sp.
C;Species: Rhodococcus sp.
C;Date: 21-Nov-1998 #sequence_revision 21-Nov-1998 #text_change 15-Mar-2004
C;Accession: S04472; A30463; S16606; S02070; S54105; S62095; S15071; S28887
R;Ikehata, O.; Nishiyama, M.; Horinouchi, S.; Beppu, T.
Eur. J. Biochem. 181, 563-570, 1989
A;Title: Primary structure of nitrile hydratase deduced from the nucleotide
sequence of a Rhodococcus species and its expression in Escherichia coli.
A;Reference number: S04471; MUID:89276338; PMID:2659343
A;Accession: S04472
A;Molecule type: DNA
A;Residues: 1-207 <IKE1>
A;Cross-references: UNIPARC:UPI0000000958; EMBL:X14668; NID:g46429;
PIDN:CAA32797.1; PID:g46430
A;Experimental source: strain N-774
A;Accession: A30463
A;Molecule type: protein
A;Residues: 2-19;47-66;144-159 <IKE2>
A;Cross-references: UNIPARC:UPI0000172FEC; UNIPARC:UPI0000172FED;
UNIPARC:UPI0000172FEE
R;Nishiyama, M.
submitted to the EMBL Data Library, March 1989
A;Reference number: S16606
A;Accession: S16606
A;Molecule type: DNA
A;Residues: 1-17,'A',19-207 <NIS>
A;Cross-references: UNIPARC:UPI00001104FD; EMBL:X14668
R;Endo, T.; Watanabe, I.
FEBS Lett. 243, 61-64, 1989